Original Research Article

The Relationship of Mother's Characteristics to Knowledge to Reduce Pain in The First Stage of Labor in the City of Balikpapan

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ABSTRACT

Background: Childbirth is a series of events where a baby is released from the mother's womb, followed by the release of the placenta and fetal membranes from the mother's body. One way of non-pharmacological management to reduce labor pain is with endorphin massage. Endorphin massage is a light touch/massage therapy that is quite important to give to pregnant women, in the time leading up to giving birth. This is because massage stimulates the body to release endorphin compounds which are pain relievers and can create a feeling of comfort.
Objective: To find out whether there is a relationship between maternal characteristics and endorphin massage to reduce pain in the first stage of labor in Balikpapan City
Method: The type of research used is descriptive quantitative with a cross sectional study design. The sample size was 50 respondents with the sampling method used was accidental sampling.
Results: There is no relationship between age group, occupation and education level on knowledge to reduce pain in the first stage of labor in Balikpapan city.
Conclusion: Respondent characteristics have no effect on respondent knowledge.

Keywords: Endorphin Massage, Knowledge and First Stage Labor Pain

INTRODUCTION

Childbirth is a series of events where a baby is released from the mother's womb, followed by the release of the placenta and fetal membranes from the mother's body. In obstetrics, there are various types of labor, including spontaneous labor, artificial labor, and assisted labor (Antik, 2017).

Everyone who experiences labor will definitely be marked by pain. Physiological pain occurs when the uterine muscles contract in an effort to open the cervix and push the baby's head towards the pelvis. Pain in the first stage of labor is a physiological process caused by cervical dilation, hypoxia of the uterine muscles during contractions, ischemia of the uterine corpus and stretching of the lower uterine segment and compression of the nerves in the cervix. The pain originates from the lower abdomen and spreads to the lumbar region of the pelvis and down the thighs. (Firdaus and Diana, 2018. Labor pain is caused by the contraction process of the uterus in an effort to expel the fruit of pregnancy. In labor, the pain that occurs causes stress and excessive worry. Respiration and pulse will also increase, disrupting the fetus's supply of needs from the placenta (Yanti, 2010).

One way of non-pharmacological management to reduce labor pain is with endorphin massage. Endorphin massage is a light touch/massage therapy that is quite important to give to pregnant women, in the

time leading up to giving birth. This is because massage stimulates the body to release endorphin compounds which are pain relievers and can create a feeling of comfort. So far, endorphins have been known as substances that have many benefits. This endorphin massage technique has no side effects on the mother and baby, and does not require expensive costs (Antik. 2017).

Research by Kartikasari et al 2016, found that Endorphin Massage can reduce back pain in pregnant women in the third trimester, can reduce pain in mothers during the first active phase of labor and can reduce the amount of blood loss in the fourth stage of labor. Apart from that, Hidayana's research (2016) states that the Endorphin Massage method is effective for postpartum mothers in facilitating breast milk production (Arti Hartiana, 2017:2). Based on the results of Antik et al.'s research in 2017 on 30 respondents from mothers giving birth, it was found that the pain scale during the first stage of labor before being given Endorphin Massage treatment was that 5 respondents (16.67%) experienced very severe pain, 13 respondents (43.33%) experienced severe pain, 11 respondents (36.67%) experienced moderate pain, and one respondent (3.33%) experienced mild pain. The pain scale for the first stage of labor after being given Endorphin Massage treatment showed that no more respondents experienced very severe pain, respondents (20%) experienced severe pain, 13 respondents (43.3%) experienced moderate pain, and 11 respondents (36.7%) experience mild pain. These data show the influence of endorphin massage on the pain intensity scale during the first stage of the active phase of labor (Diana, 2019).

Results of research conducted by Rr. Catur Leny W, 2017 found that there was an influence of Endorphin Massage on the intensity of pain during the first active phase

of labor. This research shows that Endorphin Massage is effective in the intensity of first stage labor pain in mothers giving birth. Endorphin Massage Therapy made respondents feel changes after the massage in the form of feeling more relaxed and more comfortable. According to researchers, it is necessary to involve the husband in implementing the Endorphin Massage technique (Diana, 2019). Based on the background above, researchers are interested in conducting research on maternal characteristics regarding endorphin massage to reduce pain in the first stage of labor in Balikpapan City.

MATERIALS AND METHODS
The type of research used is descriptive quantitative with a cross sectional study design. This research was to determine the characteristics of age, education, work, and intensity of labor pain in the first stage of labor in Balikpapan City in 2024. The population in this study was 100 mothers giving birth. The sampling technique uses accidental sampling technique by taking a minimum sample with a research sample size of 50 pregnant women in the 3rd trimester. Data processing uses a computer with editing, coding, tabulating, processing, data entry and cleaning techniques. Univariate and bivariate data analysis (Sugiyono, 2014). The inclusion criteria for this study are pregnant women in the third trimester (3). Meanwhile, the exclusion criteria are mothers with mental disorders and illnesses and/or complications during the third trimester of pregnancy.

STATISTIC ANALYSIS
This research uses analytical descriptive statistical tests using the Chi Square test.

RESULTS

Table 1. Distribution of Respondent Characteristics by Age Group, Occupation and Education in Balikpapan City.

Characteristics	Frequency (n=50)	Percentage (%)
Age group		
19-25	2	4.0
25-32	35	70.0
33-39	13	24.0
Work		
Private employees	38	76.0
Civil servants/TNI/Polri	2	4.0
Laborer	10	20.0
Education		
elementary school	3	6.0
junior high school	12	24.0
high school	33	66.0
College	2	4.0
Knowledge		
Not enough	7	14.0
Enough	43	86.0

Based on table 1 above, it can be seen that the characteristics of the respondents most in the age group are respondents in the age group between 25-32 years, namely 70%. Meanwhile, the smallest age group of respondents was the age group between 19-25 years, namely 4.0%. The largest number of respondents' characteristics based on work were private employees, namely 76.0%, while the lowest number of respondents' characteristics based on work were civil servants/TNI/Polri, namely 4.0%. The characteristics of respondents based on education were mostly respondents with a high school education level, namely 66.0%, while the lowest education level of respondents was tertiary, namely 4.0%. The characteristics of respondents based on sufficient level of knowledge were 84.0, while insufficient knowledge was 14.0%.

Table 2. Relationship between respondent characteristics and knowledge to reduce pain in the first stage of labor in Balikpapan City

Characteristics	Knowledge level				Amount		P Value
	Not enough		Enough				
	n	%	n	%	n	%	
Age group							
Young	3	10.7	25	83.3	28	100.0	0.68
Old	4	18.2	18	81.8	22	100.0	
Education							
Low	4	26.7	11	73.3	15	100.0	0.10
Tall	3	5.7	33	94.3	35	100.0	
Work							
Private employees	5	13.2	33	86.8	39	100.0	
Civil servants/TNI/Polri	1	50.0	1	50.0	2	100.0	0.31
Laborer	1	14.0	9	86.0	10	100	

Source: Primary Data, 2024

Based on table 2 above, it can be seen that the test of the relationship between elemental groups and respondents' knowledge to reduce labor pain in the 1st stage in Balikpapan City has a P value of 0.68. Thus, there is no relationship between age group and knowledge to reduce pain in the 1st stage of labor. The results of the study also show that there is no relationship between level of education and occupation on knowledge to reduce pain in the 1st stage of labor in the city of Balikpapan with a p value of 1.10 and 0.31.

DISCUSSION

According to Notoatmodjo in Yuliana (2017), knowledge is the result of human sensing, or the result of someone knowing about objects through their senses (eyes, nose, ears, and so on). So knowledge is a variety of things obtained by a person through the five senses. The results of this research are in line with research conducted by Lia Rosa (2017). Based on the research results, the majority of respondents did not know about reducing pain such as wiping the mother's sweat and stroking the mother's back during labor. The lack of knowledge is influenced by the socialization of health workers where midwives at Kinik do not teach or provide information about reducing pain in the first stage of labor.

Most of the respondents' level of knowledge about Endorphin Massage to Reduce Pain in First Stage Labor is quite knowledgeable because respondents have received material through class management for pregnant women. In this study, most respondents had sufficient knowledge about endorphin massage. Apart from that, several respondents said that they heard information about massage reducing labor pain in mass media and electronic media. Good knowledge can influence people's behavior in preventing first stage labor pain.

The higher a person's education, the better their knowledge compared to a low level of education which results in a lack of knowledge in facing and solving a problem (Notoatmodjo, 2003). Therefore, the higher a person's education, the higher their demands for health quality.

According to Gusti Putu (2015) Age is the span of life measured in years, it is said that early adulthood is 18-40 years old, middle adulthood is 41-60 years old, advanced adulthood is >60 years old. The level of knowledge of respondents based on age 20-35 years is mostly lacking knowledge because they have never heard of Endorphin Massage. This happens without getting knowdge about Endorphin Massage from information sources such as; health workers, friends, and could also be from the environment.

Young age tends to be associated with psychological conditions that are still unstable, easily triggering anxiety so that the pain felt becomes more intense. Age is also used as a factor in determining increasing age and understanding of pain. Pain in labor is the pain that occurs during labor which takes place starting from the first stage of labor, the pain occurs because of large activities in the mother's body to expel the baby, all of this feels painful and unpleasant for the mother. The pain that is felt starts from the appearance of contractions in the stomach, spreads to the legs, even the whole body, the pain starts like a slight hit, a prick, then reaches a very painful peak and cannot be expressed what the pain is like, this incident occurs when the muscles - The uterine muscles contract to push the baby out of the mother's womb (Winancy, 2023).

Education influences mothers on how to deal with pain experienced during childbirth. The higher the level of education, the more information and knowledge the mother has to make efforts or ways to deal with and reduce the pain experienced. So mothers who have education and knowledge about childbirth will be more able to tolerate the pain they experience. Ethnic groups with certain cultures will influence a person's response to pain. There are cultures that express pain freely, and there are also those that consider pain to be something that does not need to be expressed excessively. The stronger the quality of a person's faith, the better the body's defense mechanism against pain because it is related to a relatively stable psychological condition (Winancy, 2023).

Education is the guidance given by someone to the development of others towards certain ideals that determine how humans act and fulfill their lives. Education is needed to obtain information, for example things that support health so that it can improve the quality of life. Education can influence a person, including a person's behavior regarding lifestyle, especially in motivating people to participate in development. In

general, the higher a person's education, the easier it is to receive information. According to the results of research conducted. A person who has a higher education will try and understand how to reduce labor pain by seeking information from various sources such as reducing pain through Imagination techniques, namely by comforting and being entertained to divert the pain experienced, kissing the forehead and giving the mother food and drink in between. between contractions so that the mother feels cared for and is more enthusiastic (Firia, 2018).

Education greatly influences a person's level of knowledge. The higher a person's education, the wider their knowledge and the easier it will be to accept information and ideas from other people. In this study, the results showed that respondents with good knowledge had husbands with a tertiary education and poor knowledge had those with a high school/vocational school education.

A job is someone who has basic knowledge, skills and work values that aim to provide prosperity. In accordance with research conducted, which states that a person's work can be seen in terms of education, then they will have a good job and their knowledge will also be broader (Wiwi, 2019). According to the researcher's assumption, most of the respondents' level of knowledge based on their work as laborers is less knowledgeable because husbands work all day so they do not have free time with their wives to exchange ideas.

A person aged 26-35 years is likely to have a good level of knowledge of 74.8%. Meanwhile, someone aged less than 26 years and more than 35 years is likely to have a good level of knowledge of 35.2%. Several studies also explain that a person's age during the productive period has the best level of knowledge or cognitive abilities. Apart from that, at that age a person also has extensive experience and ability to carry out activities which of course will support his knowledge in all matters (Pangesti, 2012).

A person's age influences a person's ability to comprehend and think patterns. As people get older, their understanding and thinking patterns will develop, so that the knowledge they gain will be better. At the age of 20-35 years, individuals will play a more active role in society and social life and make more preparations for the success of adapting to old age. Apart from that, they will spend more time reading. Intellectual abilities, problem solving and verbal abilities are reported to have almost no decline at this age. This is also in line with Indiantoro (2009), that age is an individual's age which is calculated from the time of birth until several years. The older you are, the more mature a person will be in thinking and working. This also affects a person's cognitive abilities. Then, in terms of public trust, someone who is more mature will be more trusted than someone who is not mature enough (Pedro, 2015 and Erdian 2009).

According to Carter (2011), the higher a person's level of education, the easier it is to receive information so that the more experience they have, in this case in particular education is an increasingly important factor in everyday life. The level of education will influence a person's perception of cognitive abilities. A person who is highly educated also has high levels of reasoning, and a person with a higher level of education has a broader level of knowledge and a lot of experience. This also affects a person's cognitive abilities.

There is no significant relationship between work and knowledge. The mothers' occupations in this study were as traders, employees, laborers and none worked in the health sector. Researchers are of the opinion that working mothers do not have good knowledge because their work background is not in the health sector or it is not possible to get information about stunting where they work. Knowledge and experience can be obtained from the local environment (Sarah, 2022). Individuals who work in the health sector will have much better knowledge than individuals who work outside the health sector, saying that housewives were previously considered a condition of mothers who spent a lot of time only at home and

access to information was limited so that the information that mothers had was lacking, but now there are many media that can be used anytime and anywhere to access information and can be obtained from the media that you have or from anywhere, especially nowadays information is very easy to access through the media that you have (Sarah, 2022).

CONCLUSION

From the research results, it can be concluded that endorphin massage is an effective way to reduce pain in the first stage of the active phase of labor, and respondents' good or poor and sufficient knowledge about endorphin massage is influenced by several factors, including education, age and occupation, if seen from the results. statistical tests show that there is a significant relationship between age and education and the mother's level of knowledge about endorphin massage, while employment does not have a significant relationship.

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